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Mild extractability and bioavailability of polycyclic aromatic hydrocarbons in soil
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Abstract:

A study was conducted to determine the relationship between bioavailability of unaged and aged polycyclic aromatic hydrocarbons (PAHs) in soil and the amounts detected by mild solvent extraction. More aged than unaged anthracene remained in Lima foam following introduction of earthworms (*Eisenia foetida*), a mixed culture containing anthracene-degrading microorganisms, or earthworms or wheat after bacterial biodegradation of the compound. Aging decreased the percentage of anthracene recovered by mild extraction with iz-butanol from soil following introduction of earthworms, growth of wheat, biodegradation by bacteria, or when maintained sterile. Biodegradation resulted in a marked decrease in the percentage of aged and unaged anthracene recovered from soil by mild extraction with n-butanol or ethyl acetate. Aging of fluoranthene and pyrene decreased the amount removed by mild extraction with n-butanol, ethyl acetate, and propanol. The uptake of aged and unaged anthracene, fluoranthene, and pyrene by earthworms was correlated with the amounts recovered from soil by mild extraction with n-butanol, propanol, and ethyl acetate (r values in the range 0.911-0.992). The retention of aged and unaged anthracene by wheat and barley was correlated with the amounts recovered from soil by the same procedure (r values in the range 0.892-0.945). We suggest that mild extraction with organic solvents can be used to predict the bioavailability of PAHs in soil. Alexander M, Cornell Univ, Dept Soil Crop & Atmospher Sci, Ithaca, NY 14853 USA

Dear Marty

11/26/01

I ran into this by accident; and it reminded me of Shneour 1966 (encl.) - work done in my lab, not very successfully consummated

Would you consider picking up the thread? This is part of the carbon cycle not well understood.

Yours,
Joshua.